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The Files (R&D Lab)

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AUTH: HR 70-2
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1 May 1958

25X1

IN-1 Reference Oscillator (Project 2510); Prototype Check

1. The IN-1 is a self-contained battery operated audio oscil-
lator that supplies a pulse repetition rate from 30 to 3000 pps
in two bands. Because the dial does not indicate frequency directly,
reference must be made to a calibration curve (supplied with the
unit) to determine the output frequency for any particular dial
setting. Two output jacks are provided so that an ear-piece and/or
a recorder may be used simultaneously.

2. Although all of the characteristics were not investigated,
the data obtained agreed with the characteristics given in the
instructions that were supplied with the unit. The oscillator was
tested using a 2 K carbon resistor as a load instead of an ear-piece
and/or a recorder.

3. Test Results:*

    (a) Frequency Range   : 30 to 3000 pps within plus
                                          or minus 2%.

    (b) Frequency Stability : Plus or minus 2% with supply
                                          voltage variation from 15.0
                                          to 30.0 volts.

    (c) Output Wave Form : Pulse
    (d) Warm-up Time : None
    (e) Output Voltage : Peak pulse approximately equal
                                          to the power supply voltage
                                        from 15 to 30 volts.

    (f) Resettability : Plus or minus one cycle on the
                                          low band (band "A") and plus
                                        or minus two cycles on the
                                        high band (band "B").

4. Conclusion:

    The results of the tests performed indicate that the IN-1
will perform its intended function as reference oscillator satis-
factorily.

*All tests were conducted at room temperature (approximately 75°F).

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5. Recommendation:

The battery should be removed after it is exhausted to prevent it from sticking in the holder.

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Design Unit Endorsement:

1. The operating notes and instructions will carry a statement concerning the removal of the battery when it has become exhausted or when the equipment is not in use.

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Lab/JWM/DLC/jcm (1 May 1958)

Distribution: Original - Addressee
                 1 - Design Unit Files ✓
                 1 - R&D Chrono
                 1 - Dev/s

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